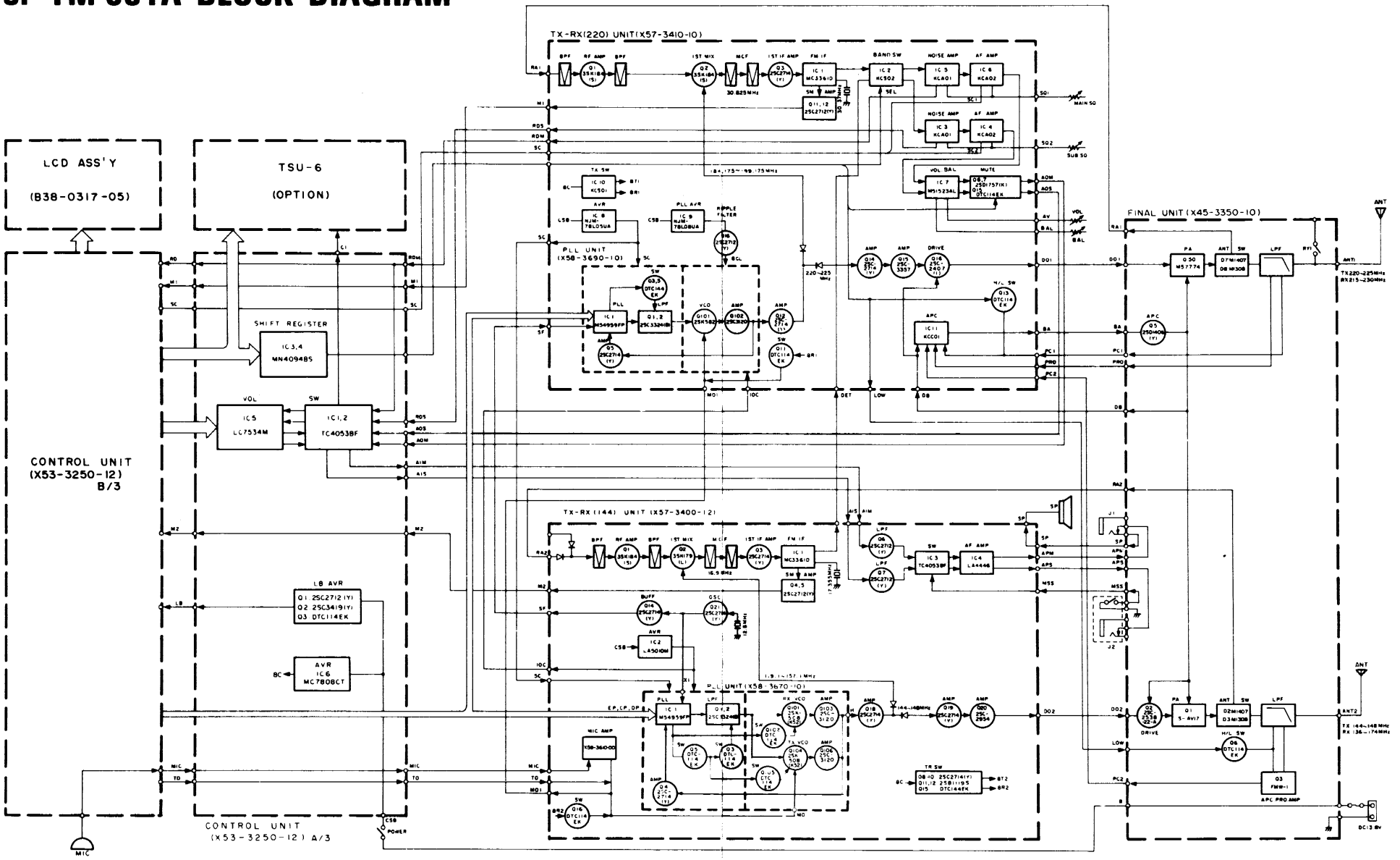
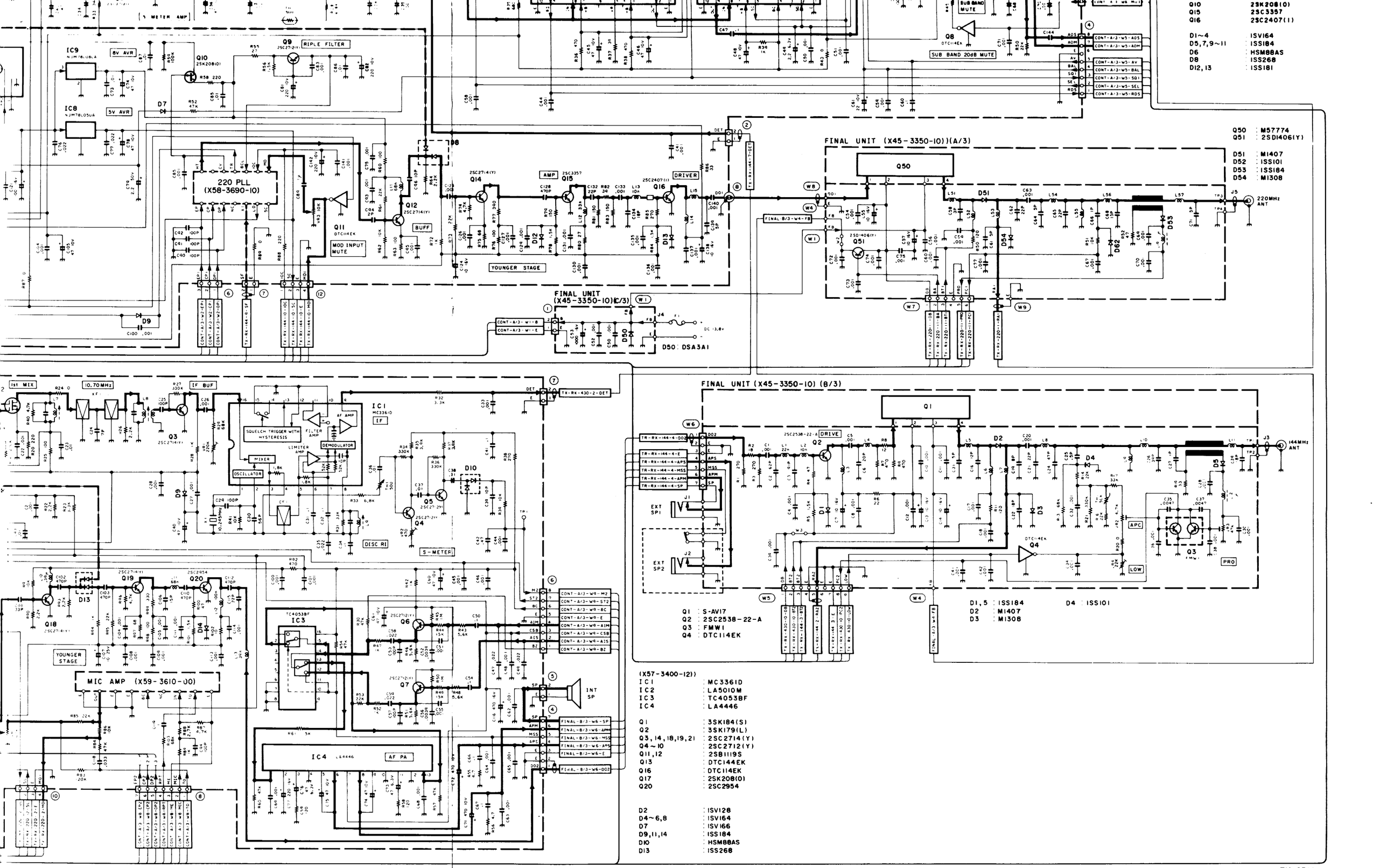
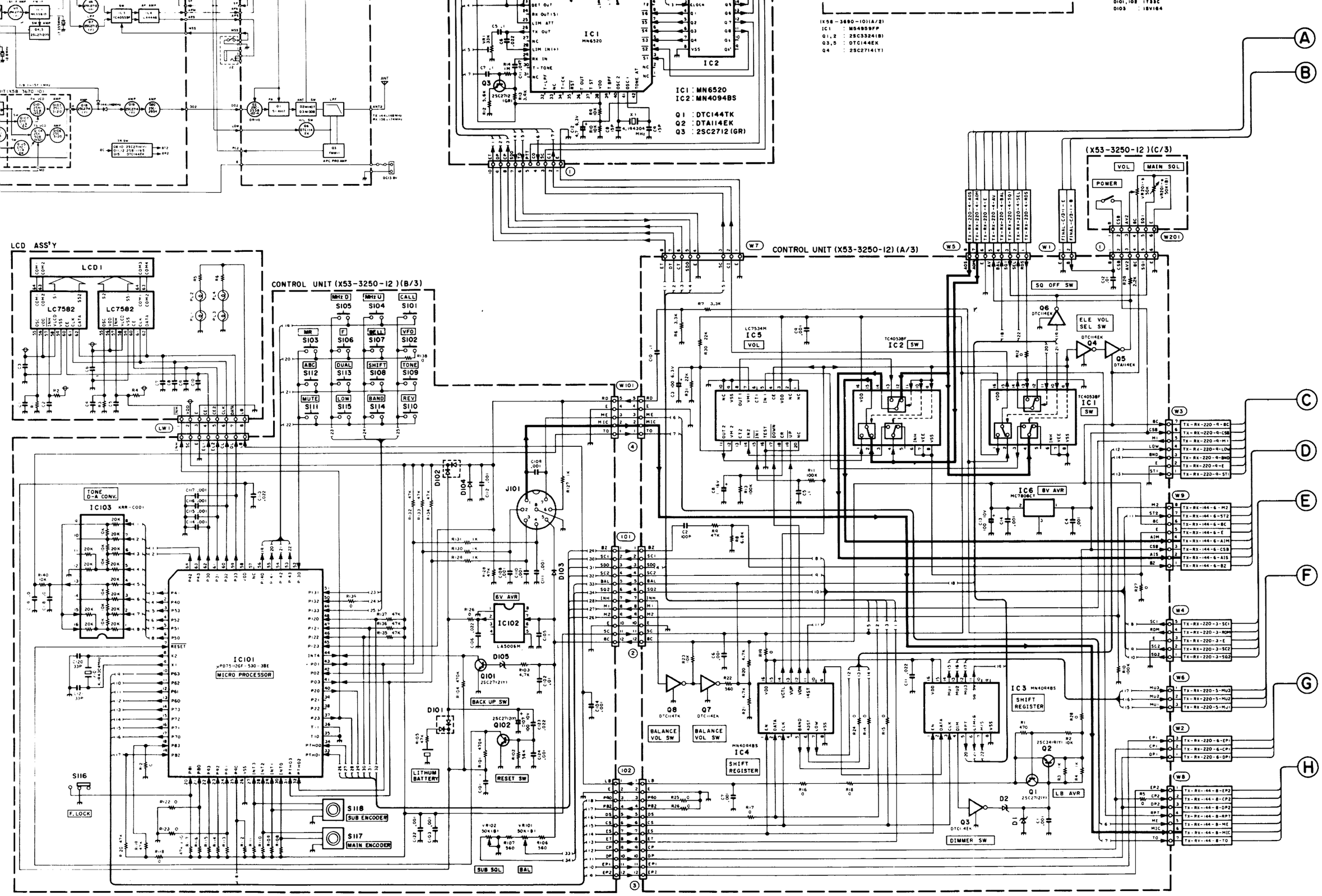
5. TM-631A BLOCK DIAGRAM



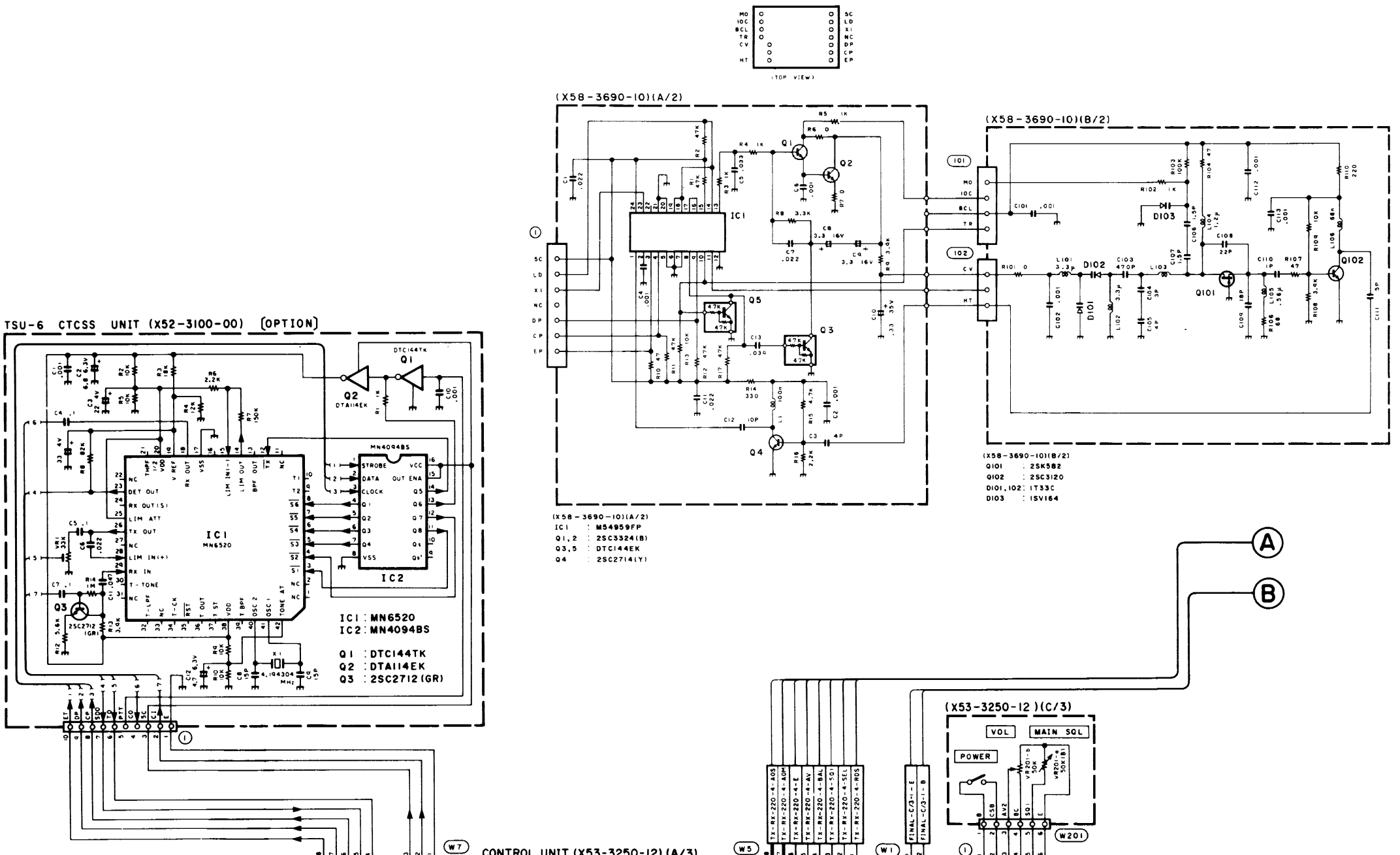


TM-631A

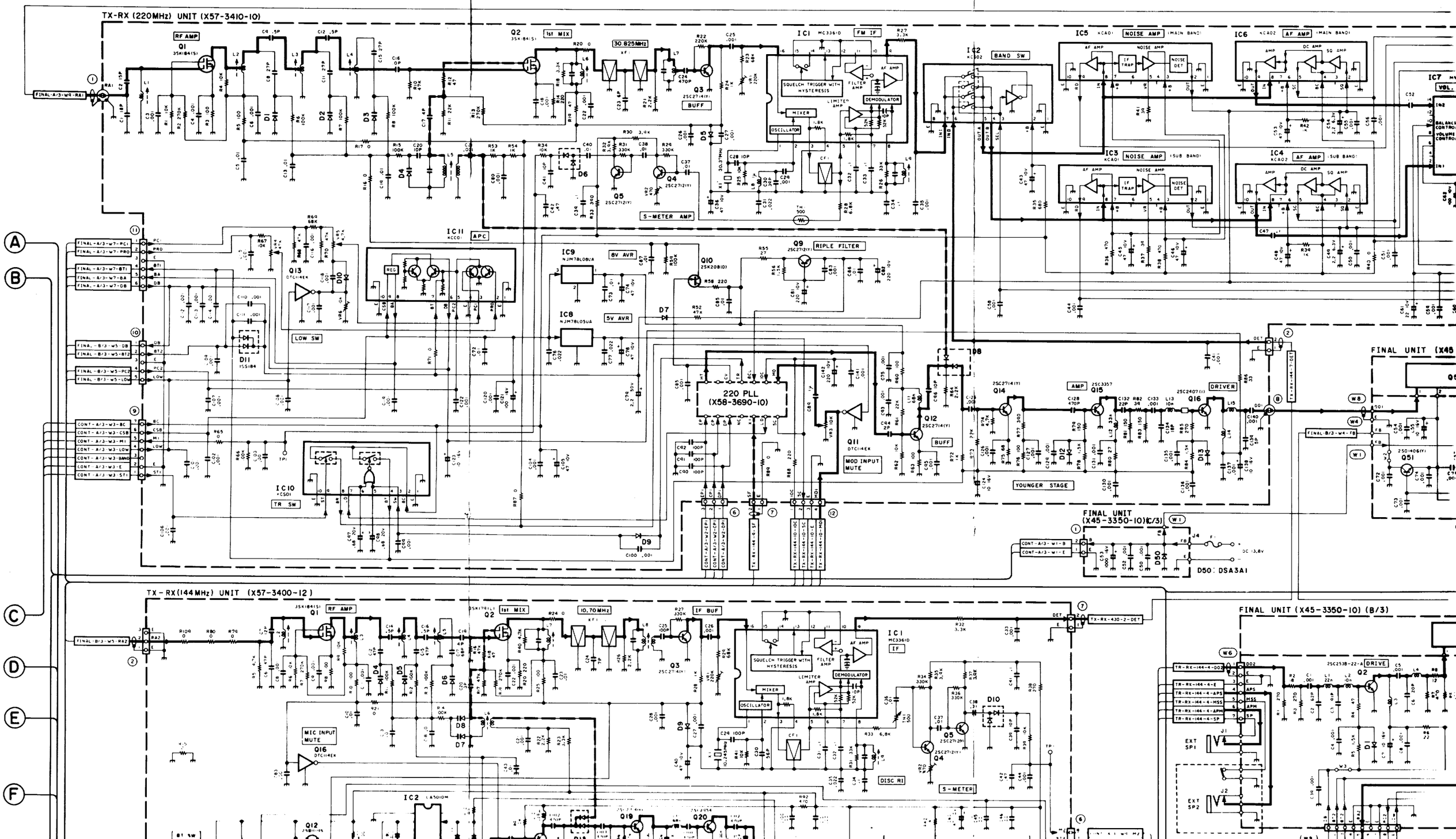
Note:
Circuit is subject to change without notice due to advancements in technology.



Note:
Circuit is subject to change without notice due to advancements in technology.


TSU-6 CTCSS UNIT (X52-3100-00) (OPTION)
IC1 : MN6520
IC2 : MN4094BS
Q1 : DTC144TK
Q2 : DTA114EK
Q3 : 2SC2712 (GR)
(X58-3690-10)(A/2)
IC1 : M54959FP
Q1,2 : 2SC3324(B)
Q3,5 : DTC144EK
Q4 : 2SC2714(Y)
(X58-3690-10)(B/2)
Q101 : 2SK582
Q102 : 2SC3120
D101,102 : 1T33C
D103 : 1SV164
(X53-3250-12)(C/3)
CONTROL UNIT (X53-3250-12)(A/3)
A
B

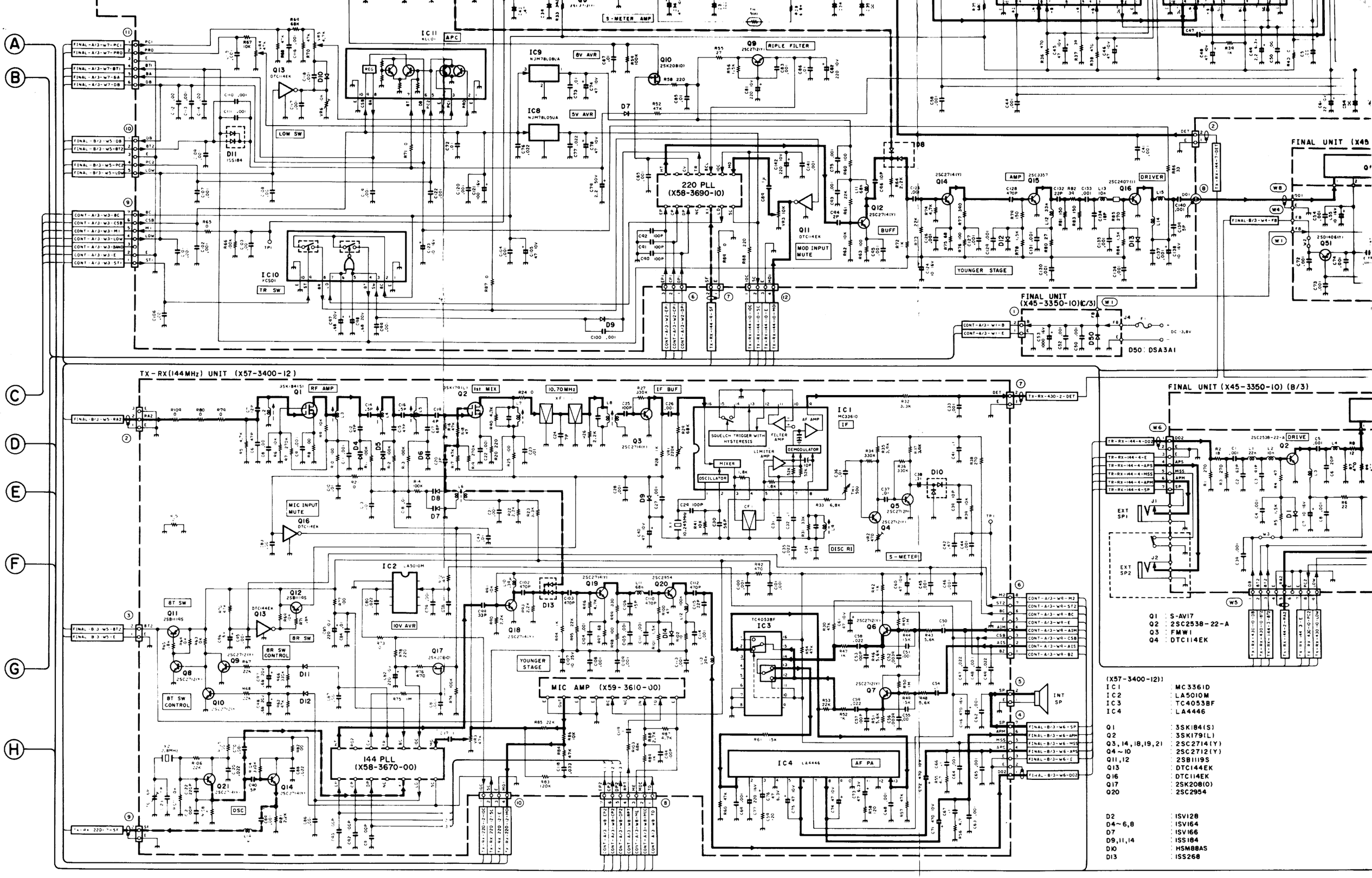
5. TM-631A SCHEMATIC DIAGRAM



(X57-3410-10)

IC1	MC3361D
IC2	KCS02
IC3,5	KCA01
IC4,6	KCA02
IC7	M51523AL
IC8	NJM78L05UA
IC9	NJM78L08UA
IC10	KCS01
IC11	KCC01
Q1,2	3SK184(S)
Q3,12,14	2SC2714(Y)
Q4,5,9	2SC2712(Y)
Q6,7	2SD1757(K)
Q8,11,13	DTC114EK
Q10	2SK208(O)
Q15	2SC3357
Q16	2SC2407(I)
D1~4	1SV164
D5,7,9~11	1SS184
D6	HSM88AS
D8	1SS268
D12,13	1SS181
Q50	M57774
Q51	2SD1406(Y)
D51	M1407
D52	1SS101
D53	1SS184
D54	M1308

1st MIX
30.825MHz
BUFF
FM IF
IC1 MC3361D
SQUELCH TRIGGER WITH HYSTERESIS
MIXER
OSCILLATOR
AF AMP
FILTER AMP
DEMODULATOR
LIMITER AMP
S-METER AMP
BAND SW
NOISE AMP (MAIN BAND)
AF AMP (MAIN BAND)
NOISE AMP (SUB BAND)
AF AMP (SUB BAND)
VOL. BAL
BALANCE CONTROL
VOLUME CONTROL
MAIN BAND MUTE
SUB BAND MUTE
SUB BAND 20dB MUTE
8V AVR
5V AVR
220 PLL (X58-3690-10)
RIPLE FILTER
MOD INPUT MUTE
YOUNGER STAGE
AMP
DRIVER
FINAL UNIT (X45-3350-10)(A/3)
FINAL UNIT (X45-3350-10)(C/3)
D50: DSA3A1
220MHz ANT
10.70MHz
IF BUF
IF
DISC RI
FINAL UNIT (X45-3350-10) (B/3)
DRIVE
APC
PRO
LOW
144MHz ANT
EXT SP1
EXT SP2


TX-RX(144MHz) UNIT (X57-3400-12)
FINAL UNIT (X45-3350-10) (B/3)
FINAL UNIT (X45
RF AMP
1st MIX
10.70MHz
IF BUF
IF
AF AMP
DEMODULATOR
SQUELCH TRIGGER WITH HYSTERESIS
FILTER AMP
LIMITER AMP
MIXER
OSCILLATOR
DISC RI
S-METER
APC
REG
8V AVR
5V AVR
RIPLE FILTER
LOW SW
TR SW
MIC INPUT MUTE
MOD INPUT MUTE
BUFF
AMP
DRIVER
YOUNGER STAGE
8T SW
8R SW
8R SW CONTROL
8T SW CONTROL
IOV AVR
220 PLL (X58-3690-10)
144 PLL (X58-3670-00)
MIC AMP (X59-3610-00)
IC1 MC3361D
IC2 LA5010M
IC3 TC4053BF
IC4 LA4446
Q1 S-AV17
Q2 2SC2538-22-A
Q3 FMW1
Q4 DTC114EK
(X57-3400-12)
IC1 : MC3361D
IC2 : LA5010M
IC3 : TC4053BF
IC4 : LA4446
Q1 : 3SK184(S)
Q2 : 3SK179(L)
Q3,14,18,19,21 : 2SC2714(Y)
Q4~10 : 2SC2712(Y)
Q11,12 : 2SB1119S
Q13 : DTC144EK
Q16 : DTC114EK
Q17 : 2SK208(0)
Q20 : 2SC2954
D2 : ISV128
D4~6,8 : ISV164
D7 : ISV166
D9,11,14 : ISS184
D10 : HSM88AS
D13 : ISS268